

State Maps and Prescriptive Packages

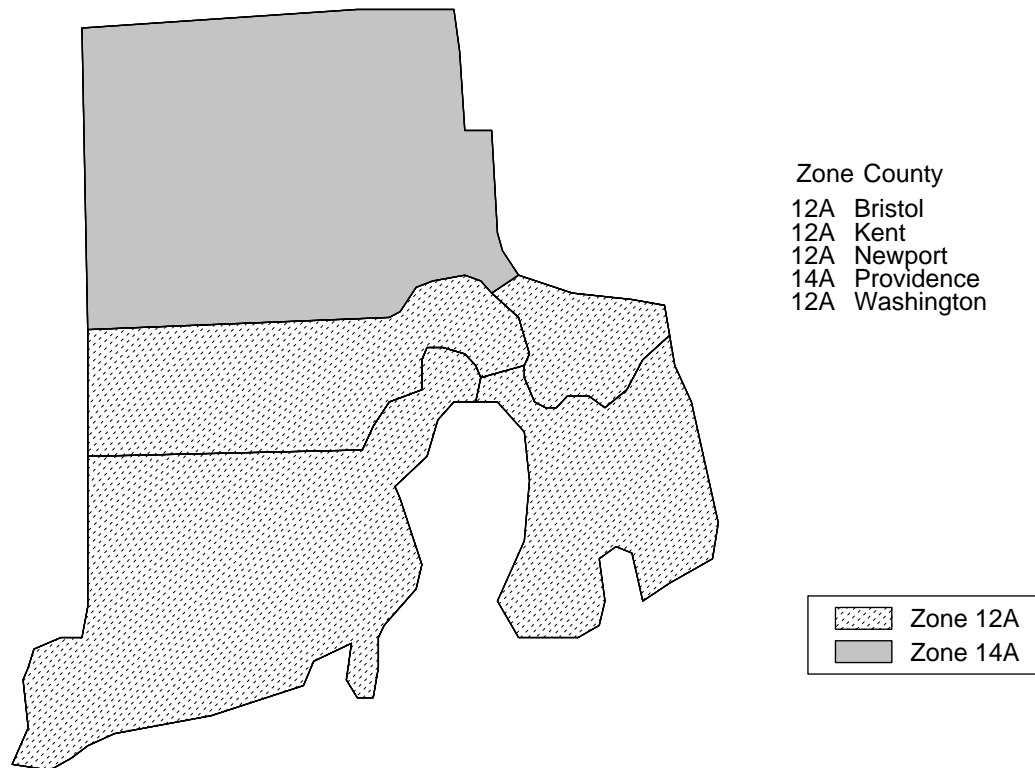
April 2000

The State Maps and Prescriptive Packages contain supporting materials that are needed when using the Envelope and Mechanical Compliance Guides. Insulation and other building envelope requirements and some mechanical system requirements vary by climate. The State Maps divide the United States into 33 different climate zones at a county level. Zones are numbered from 1 through 19 (consistent with the IECC and MECcheck climate zones) and have a, b, and c designations to reflect climate differences that affect cooling; e.g., cooling degree days and solar radiation. The climate maps are unchanged from Version 1.

To determine the climate zone to use with your building, locate the map for your state and identify the zone number from the legend or county list.

To determine insulation and other building envelope requirements, find the prescriptive package number corresponding to your climate zone. The *Envelope Compliance Guide* employs a package approach that requires all components in your design to meet or exceed the prescribed efficiency levels contained in the prescriptive package. If you find the prescriptive packages too constraining, consider using the COMcheck-EZ software, which allows tradeoffs among building envelope components.

RHODE ISLAND



COMcheck-EZ™ Prescriptive Packages

Climate Zone 12a

Envelope Component	Low Fenestration Area (0-10% Window-Wall Ratio)	Medium Fenestration Area (10%-25% Window-Wall Ratio)	High Fenestration Area (25%-40% Window-Wall Ratio)	Very High Fenestration Area (40%-50% Window-Wall Ratio)
Walls (a)	No Framing or Metal Framing or Wood Framing	No Framing or Metal Framing or Wood Framing	No Framing or Metal Framing or Wood Framing	No Framing or Metal Framing or Wood Framing
Framed Any Spacing <i>Minimum R-Value</i>	NA 11 11	NA 11 11	NA 11 11	NA 13 11
CMU, 8 in. or greater with Integral Insulation(b) <i>Minimum R-Value</i>	5 11 11	5 11 11	5 11 11	5 11 11
All Other Masonry Walls(c) <i>Minimum R-Value</i>	5 11 11	5 11 11	5 11 11	5 11 11
Windows	No Projection ^{s.25} Projection ^{s.5} Projection	No Projection ^{s.25} Projection ^{s.5} Projection	No Projection ^{s.25} Projection ^{s.5} Projection	No Projection ^{s.25} Projection ^{s.5} Projection
<i>Maximum Solar Heat Gain Coefficient</i>	Any Any Any	0.6 0.7 Any	0.5 0.6 0.7	0.4 0.5 0.7
<i>Maximum U-Factor</i>	Any Any Any	0.6 0.6 0.6	0.5 0.5 0.5	0.4 0.4 0.4
Skylight (Limit 3% of Roof Area)				
<i>Maximum U-Factor</i>	0.8	0.8	0.8	0.8
Roof	Continuous Insulation or Roof Cavity Insulation	Continuous Insulation or Roof Cavity Insulation	Continuous Insulation or Roof Cavity Insulation	Continuous Insulation or Roof Cavity Insulation
All-Wood Joist/Truss <i>Minimum R-Value</i>	16 19	19 25	23 30	23 30
Nonwood Joist/Truss <i>Minimum R-Value</i>	17 25	20 25	24 30	24 30
Concrete Slab or Deck <i>Minimum R-Value</i>	16 NA	19 NA	23 NA	23 NA
Metal Purlin with Thermal Break <i>Minimum R-Value</i>	17 25	20 30	24 X	24 30
Metal Purlin without Thermal Break <i>Minimum R-Value</i>	17 X	20 X	24 X	24 38
Floor	Continuous Insulation or Cavity Insulation	Continuous Insulation or Cavity Insulation	Continuous Insulation or Cavity Insulation	Continuous Insulation or Cavity Insulation
All-Wood Joist/Truss <i>Minimum R-Value</i>	16 19	16 19	16 19	16 19
Nonwood Joist/Truss <i>Minimum R-Value</i>	16 19	16 19	16 19	16 19
Concrete Slab or Deck <i>Minimum R-Value</i>	16 NA	16 NA	16 NA	16 NA
Slab Edge or Basement Walls	Insulation	Insulation	Insulation	Insulation
<i>Minimum R-Value</i>	0	0	8	8

Notes:

- (a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.
 (b) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material. Minimum R-values are in addition to insulation in CMU voids.
 (c) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft² or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.

- "NA" indicates the category is not applicable.
 - A minimum R-value of zero indicates no insulation is required.
 - "Any" indicates any available product will comply.
 - "X" indicates no complying option exists in the prescriptive packages.

COMcheck-EZ™ Prescriptive Packages

Climate Zone 14a

Envelope Component	Low Fenestration Area (0-10% Window-Wall Ratio)			Medium Fenestration Area (10%-25% Window-Wall Ratio)			High Fenestration Area (25%-40% Window-Wall Ratio)			Very High Fenestration Area (40%-50% Window-Wall Ratio)		
Walls (a,b)	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing	No Framing	Metal Framing	Wood Framing
Framed Minimum Cavity R-Value (c)	NA	13	11	NA	13	11	NA	13	11	NA	13	11
Any Spacing Minimum Continuous R-Value (d)	NA	3	0	NA	3	0	NA	3	0	NA	3	0
CMU, 8 in. or greater Minimum Cavity R-Value	NA	11	11	NA	11	11	NA	11	11	NA	11	11
with Integral Insulation(e) Minimum Continuous R-Value	5	0	0	5	0	0	5	0	0	5	0	0
All Other Minimum Cavity R-Value	NA	11	11	NA	11	11	NA	11	11	NA	11	11
Masonry Walls(f) Minimum Continuous R-Value	5	0	0	5	0	0	5	0	0	5	0	0
Windows	No Projection	≤.25 Projection	≥.5 Projection	No Projection	≤.25 Projection	≥.5 Projection	No Projection	≤.25 Projection	≥.5 Projection	No Projection	≤.25 Projection	≥.5 Projection
Maximum Solar Heat Gain Coefficient	Any	Any	Any	0.5	0.6	0.7	0.4	0.5	0.6	0.4	0.5	0.6
Maximum U-Factor	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4
Skylight (Limit 3% of Roof Area)												
Maximum U-Factor	0.8			0.8			0.8			0.8		
Roof	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation	Continuous Insulation	or	Roof Cavity Insulation
All-Wood Joist/Truss Minimum R-Value	17		19	19		25	23		30	23		30
Nonwood Joist/Truss Minimum R-Value	18		25	20		25	24		30	24		30
Concrete Slab or Deck Minimum R-Value	17		NA	19		NA	23		NA	23		NA
Metal Purlin with Thermal Break Minimum R-Value	18		30	20		30	24		X	24		38
Metal Purlin without Thermal Break Minimum R-Value	18		X	20		X	24		X	24		38
Floor	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation	Continuous Insulation	or	Cavity Insulation
All-Wood Joist/Truss Minimum R-Value	18		25	18		25	18		25	18		25
Nonwood Joist/Truss Minimum R-Value	19		25	19		25	19		25	19		25
Concrete Slab or Deck Minimum R-Value	19		NA	19		NA	19		NA	19		NA
Slab Edge or Basement Walls	Insulation			Insulation			Insulation			Insulation		
Minimum R-Value	0			8			8			8		

Notes:

- (a) For walls next to unconditioned spaces, use the Low Fenestration Area wall requirements.
 (b) Where values are shown for both cavity and continuous insulation, both requirements must be met.
 (c) Cavity insulation is insulation between framing members or furring strips and does not refer to integral insulation in CMUs.
 (d) Continuous insulation is insulation that is continuous across structural members, and its effectiveness is undiminished by compression or bridging.
 (e) Integral insulation in concrete masonry units may be perlite, vermiculite, or other insulating material. Minimum R-values are in addition to insulation in CMU voids.

- (f) Use of the Other Masonry Walls category is restricted to walls weighing 35 lb/ft² or more; lightweight masonry veneers and unfilled CMUs <8 in. in thickness do not qualify.

- "NA" indicates the category is not applicable.
- A minimum R-value of zero indicates no insulation is required.
- "Any" indicates any available product will comply.
- "X" indicates no complying option exists in the prescriptive packages.